

# Fondness of Playing Football with Blood Grouping

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## ABSTRACT

Objective of present study was to coordinate blood grouping with likeness of playing football. Presence or absence of antigens and Rh-factor determine the blood group of a person. A questionnaire was prepared about the fondness of playing football in relation with blood group. Blood group test was performed to check blood group of every subject. Football is a game played between two teams in which a baseball is kicked to the net of opposite team to secure the goal. This game is beneficial for both body and mind. Among all blood groups, the subjects of blood group B- were fond of playing football and AB- containing subjects were least fond of playing football.

**Keywords:** Football; Antiserum; Blood group; ABO; Rh-factor; Rh blood group system; Red blood cells; Physical health; Antigen A; Antigen B.

## 1. Introduction

The system in which the blood of different persons is divided into different groups on the basis of presence or absence of various antigens on red blood cells or the factors of these antigens is called blood group system. The two types of such systems are ABO blood group system and Rh blood group system. Both of these are based on the genetic study of antigens present on the red blood cells. Some genes have more than one allele; such genes express the multi allelic traits. Occurrence of antigens is multi allelic trait. A polymeric gene-I is present on chromosome 9. This gene has three alleles. These three alleles  $I^A I^B$  and  $i$ , express the four phenotypes. If alleles  $I^A$  and  $i$  of gene I are present, then antigen A is present in blood and blood group is A. If alleles  $I^B$  and  $I$  are present, then antigen B is present in blood and blood group is B. If  $I^A$  and  $I^B$  alleles coexist then blood contains both antigen A and B and the blood group is AB. If both allele  $I^A$  and  $I^B$  are absent then blood group is O. In Rh-system blood of person may be + or -. This system is based on presence or absence of Rh-factor [1],[2].

Football is a physical game played between two teams. A ball is spun between players of both teams to secure goal. Ball is kicked towards the net of opposite team and when ball touches net, the goal is secured. Like other physical games, football also has many advantages on physical and mental health of a person. It enhances aerobic activity and health of heart. Playing football builds sense of the coordination and team work. It also helps to enhance confidence level. It provides opportunity for the players to improve their hand-eye coordination. Football is now very popular game and this game is being played in more than 200 countries. Football also has interesting historical background. Football is national game of Mauritius.

### 1.1. Study Objectives

Objective of the present study was to coordinate blood grouping with fondness of playing football.

## 2. Material & Methods

The total 174 subjects participated in this practice. All of these subjects were students of Bahauddin Zakariya University, Multan Pakistan. The age of participants ranged from 18 to 22 years.

## 2.1. Blood Grouping

We performed the blood group test in laboratory. First of all, we took the needle and fixed at the tip of the index finger of left hand. Few drops of blood appeared at the tip of finger. We poured the drops on slide at three different points. Then we took anti-serum A, B and D and poured few drops of each anti-serum on three different sites of blood drops. The antibody of different blood types coagulated as a result of exposure to anti-serum. From this practice, we concluded the blood groups.

## 2.2. The Study Design

A questionnaire was prepared about correspondence of fondness of playing football with blood grouping that contained a question that did you like to play football? For this practice blood group of every subject was tested. Among all the subjects, the persons with blood group B<sup>-</sup> showed most affinity towards the football and persons with blood group AB<sup>-</sup> were least fond of playing football. Among A blood group, the subjects of A<sup>+</sup> were fonder of playing football than A<sup>-</sup>. But in B blood group B<sup>-</sup> were fonder of football game than B<sup>+</sup>.

## 2.3. Statistical Analysis

Statistical analysis was performed by using MS excel.

## 3. Result and Discussion

Analysis of correspondence of fondness of playing football with blood grouping is given in table 1. From all the participants the blood group A<sup>+</sup> showed more affinity and secured 58% of likeness while only 41.94% did not like to play football. Among people of blood group A<sup>-</sup> the ratio of participants that liked to play football and that did not like to play football was equal. Among the people of blood group B<sup>+</sup> only 28.81% liked to play football but 71.19% did not like to play football. From B<sup>-</sup> 80% liked to play football and it was highest ratio, 20% did not like to play football. Among the participants of blood group AB<sup>+</sup> more people liked to play football and percentage is 54.54% while only 45.46% did not like to play football. From the participants of blood group AB<sup>-</sup> no one liked to play football. From the participants of blood group O<sup>+</sup> 44.64% liked to play football and 55.36% did not like to play football. Among the participants of O<sup>-</sup> 20% liked to play football but 80% did not like to play football. These were analytical results of this project to show affinity different blood groups with football quantitatively.

**Table 1.** Correspondence of fondness of playing football with blood grouping

	Interested in playing football	Not Interested in playing football
A <sup>+</sup>	58.06%	41.94%
A <sup>-</sup>	50%	50%
B <sup>+</sup>	28.81%	71.19%
B <sup>-</sup>	80%	20%
AB <sup>+</sup>	54.54%	45.46%
AB <sup>-</sup>	0%	100%
O <sup>+</sup>	44.64%	55.36%
O <sup>-</sup>	20%	80%

Questionnaire based studies have been given important outcomes in current researches [3-5]. Already a research was made related to this project, of title, 'What does blood groups have to do with the Japan football team?' In Japan national team of 2014 out of 23 players only three had B type blood group and in 2012 there was not a single player with blood group B. It showed that blood type really determine the character. The reason behind this observation was that the coach of National team of Japan payed stress on teamwork but mostly persons with B type blood group were free in thoughts and opinions. They were self-centered and could not survive in team. In present research and previous researches it was illustrated that all traits either physical or behavioral, are determined by genotype and environment of an individual and all traits are basically interlinked [6-10].

#### 4. Conclusion

It was concluded from present study that the subjects with blood group B<sup>+</sup> show more affinity towards football playing and subjects of blood group AB<sup>+</sup> are least fond of playing football.

##### 4.1. Future Recommendations

In the future, the consideration of blood grouping in football could play a significant role in enhancing player performance as well as in health management. Additionally, blood grouping could inform team dynamics, with the potential for improved synergy between players who share similar genetic markers that impact their stamina or resilience. While this idea is still speculative, the integration of blood type-specific strategies could be part of the next frontier in optimizing athletic performance and ensuring player longevity in football.

#### Declarations

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##### Competing Interests Statement

The authors declare no competing financial, professional, or personal interests.

##### Consent for publication

The authors declare that they consented to the publication of this study.

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